

Notice of Allowability

Application No.

09/731,010

Applicant(s)

AOKI ET AL.

Examiner

Art Unit

Anand Bhatnagar

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/30/05.
2. ☒ The allowed claim(s) is/are 1-4, 6-18, 20-28, and 30.
3. ☒ The drawings filed on 12/27/00 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Response to Arguments

1. Applicant's after final amendment filed on 03/30/05 has been entered and made of record.
2. Applicant has canceled claim 29. Claims 5 and 19 were canceled previously. Currently claims 1-4, 6-18, 20-28, and 30 are pending.

Allowable Subject Matter

3. Claims 1-4, 6-18, 20-28, and 30 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art of Kikuchi et al. (U.S. patent 6,298,143 B1) discloses to detect a moving object in a series of images wherein the images are broken down into segments and these segments are analyzed for the change in brightness and based on these changes is determined if there is motion of a object in the images. Regarding claims 1, 2, 4, and 26 these claims are allowed for applicant's remarks, pages 12 and 13, in paper filed on 06/28/04. Regarding claim 3 Kikuchi et al. does not teach the feature of "wherein in each of said first dividing step and said second dividing step, the individual first unit block overlaps neighboring unit blocks disposed adjacent to the last-named first unit block," that, in combination with the other claim limitations. Regarding claim 6, Kikuchi et al. does not teach the feature of "a variance comparing step of comparing the past variance before a current time based on the history information created in said

history information creating step with the current variance in the current time based on the input image to discriminate whether an moving object appears in the input image," that, in combination with the other claim limitations. Regarding claim 7, Kikuchi et al. does not teach the feature of "an appearance detecting step of discriminating whether or not a moving object appears in the input image based on the variance calculated in said variance calculating step, wherein in said appearance detecting step, if the number of the zones whose variance is equal to or higher than a first threshold is equal to or larger than a predetermined value, the appearance of the moving object is notified, and if the number of the zones whose variance is equal to or lower than a second threshold is equal to or larger than a predetermined value, the absence of the moving object is notified," that, in combination with the other claim limitations. Regarding claim 9, Kikuchi et al. does not teach the feature of "if the number of the zones whose increase value of variance is equal to or higher than a third threshold is equal to or larger than a predetermined value, the appearance of the moving object is notified, and if the number of the zones whose decrease value of variance is equal to or higher than a fourth threshold is equal to or larger than a predetermined value, the absence of the moving object is notified," that, in combination with the other claim limitations. Regarding claim 13, Kikuchi et al. does not teach the feature of "wherein in said appearance detecting step, if the variance from which entering of the moving object is to be detected is equal to or higher than a first threshold, the appearance of the moving object is notified, and if the decrease value of variance

from which leaving of the moving object is to be detected is equal to or larger than a fourth threshold, the absence of the moving object is notified," that, in combination with the other claim limitations. Regarding claim 15, Kikuchi et al. does not teach the feature of "an appearance detecting step of discriminating whether or not a moving object appears in the input image based on the variance calculated in said variance calculating step, wherein in said appearance detecting step, if an increase value of variance from which entering of the moving object is to be detected is equal to or higher than a third threshold, the appearance of the moving object is notified, and if the variance from which leaving of the moving object is to be detected is equal to or lower than a second threshold, the absence of the moving object is notified," that, in combination with the other claim limitations. Regarding claim 17, Kikuchi et al. does not teach the feature of "an appearance detecting step of discriminating whether or not a moving object appears in the input image based on the variance calculated in said variance calculating step, wherein in said appearance detecting step, the monitoring region is set by expanding an assumed area of the moving object," that, in combination with the other claim limitations. Regarding claims 20, 21, and 30, Kikuchi et al. does not teach the feature of "a zone discriminating step of discriminating whether an individual one of the plural zones is an object-appearing zone in which the moving object appears or an object-free zone in which the moving object is absent, by comparing the variance obtained in said variance calculating step with a predetermined value," that, in combination with

their respective claim limitations. Regarding claim 27, Kikuchi et al. does not teach the feature of “an in-moving-area background difference calculating unit, connected to said block-background difference calculating unit, for setting a moving area surrounding the extracted moving block and comparing the distribution pattern of brightness values of the input image and the distribution pattern of brightness values of the background image to discriminate whether the moving object appears in the input image,” that, in combination with the other claim limitations. Regarding claim 28, Kikuchi et al. does not teach the feature of “a variance evaluating unit, connected to said variance calculating unit and said variance history managing unit, for evaluating the variance calculated by said variance calculating unit and the history information output from said variance history managing unit,” that, in combination with the other claim limitations.

5. Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance”.

Art Unit: 2623

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Amelia Au whose number is (571) 272-7414, group fax is 703-872-9306, and Tech center 2600 customer service office number is 703-306-0377.

A handwritten signature in black ink, appearing to read 'Samir', followed by a long horizontal flourish.

**SAMIR AHMED
PRIMARY EXAMINER**

Handwritten initials 'AB' in black ink.

Anand Bhatnagar

Art Unit 2623

April 17, 2005